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Effectiveness of Extension Work With Farm Home Kitchens

M. C. Wilson, Mary A. Rokahr, and Myrtle M. Weldon





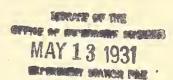
Cooperative Extension Work in Agriculture and Home Economics

Extension Service Circular 154

April, 1931

EFFECTIVENESS OF EXTENSION WORK

WITH FARM HOME KITCHENS1



A Study of 280 Farm Homes in McCracken and McLean Counties, Kentucky, 1930

M. C. Wilson, Mary A. Rokahr, and Myrtle M. Weldon4

Acknowledgement

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^{1/}A study similar to this made in two New Jersey counties is reported in Extension Service Circular 155, The Effectiveness of Extension Work in Home Management, New Jersey.

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DISTRIBUTION: One copy of this circular has been sent to each State extension director, State and assistant State home demonstration leader, white and negro, home-management specialist, and to each agricultural-college and experiment-station library.

Contents

| | Page |
|---|-------|
| Purpose and scope of study | Ž |
| Method of collecting date | 2 |
| Conduct of kitchen extension in Kentucky | 3 |
| Information regarding farm homes included in study | 7 |
| Kitchens | 8 |
| | 9 |
| Water supply | - |
| Heating and lighting | |
| Laundering | |
| Wiscellaneous kitchen equipment | 12 |
| Assistance from the family in household tasks and | |
| outdoor activities of home makers | |
| Influence of kitchen extension work | 14 |
| Effectiveness of means and agencies employed in kitchen | |
| extension as related to their use | 16,17 |
| Relative effectiveness of means and agencies | 18 |
| Extension workers assisting with changes in kitchen practices | 19 |
| Attitude toward extension | 20 |
| Factors affecting adoption of kitchen practices | 20 |
| Tenure | 20 |
| Size of farm | 21 |
| Homes with telephones | |
| Distance from extension office | 22 |
| Character of roads | _ |
| | |
| Educational training | |
| Age of farm women | |
| Membership in home demonstration clubs | |
| Contact with kitchen extension | |
| Summary | 27,28 |

PURPOSE AND SCOPE OF STUDY

This circular reports the results of a study of representative farm homes in two typical west Kentucky counties for the purpose of obtaining reliable information regarding present farm-home kitchens. Information was obtained as to physical characteristics of kitchens, water supply, sewage disposal, lighting, heating, laundry methods, and kitchen equipment. Data on household help, assistance with household work rendered by members of the family, farm work and work off the farm done by farm women, and the like, were also obtained.

The study relates to extension activities in hitchen improvement, the means and agencies employed in disseminating information regarding kitchens, and their effectiveness in influencing farm women to make changes in connection with the various activities centering in the farm kitchens.

The relationship between such factors as home tenure, educational training, age of farm women, and participation in extension activities, and the use of extension information, are also considered.



METHOD OF COLLECTING DATA

The data considered in this study have all been collected by the personal-interview-survey method. A representative area comprising about 150 farm homes was selected in each of two counties. Experienced extension workers visited every farm home in the areas and obtained comparable data regarding farm kitchens and related activities. The interviewers were coached in methods of asking questions, and the use of the questionnaire card, prior to going to the field. (Figs. la and lb.) The questionnaire cards were checked at headquarters each day for errors and inconsistencies, and additional information was obtained where necessary.

A total of 280 farm-home records was obtained, 138 in McCracken County, and 142 in McLean County. The field work was done during May, 1930.

CONDUCT OF KITCHEN EXTENSION IN KENTUCKY

Home demonstration work in Kentucky is conducted largely through formal home demonstration clubs organized in the various communities. The yearly programs are determined by the interests of the members, the county-wide extension program, and the specialists' assistance available from the State extension office.

The kitchen project had been a major project in the home demenstration programs of the two counties involved, for at least two years prior to the collection of field data. Some attention had of course been given to kitchen problems in a miscellaneous way prior to that time.

Local leaders have been used quite extensively in developing the kitchen project. Two women from each home demonstration club undertaking the work were invited to a central place at frequent intervals for intensive subject-matter training by the State home-management specialist and the county home demonstration agent. Leaders from each community were asked to locate at least one demonstration kitchen in their community. Some of the leaders considered their own kitchens as demonstration kitchens where as many of the better practices advocated by the specialist and agent were put into use, as was possible. The leaders took an active part in supervising improvements made in other demonstration kitchens. The training meetings centered around the following subjects:

(1) Know your kitchen;

(2) The back-saving kitchen;

(3) The step-saving kitchen;

(4) An attractive kitchen.

In McLean County the following phases of the project were also emphasized:

(1) Kitchen time-savers;

(2) Bedroom time-savers;

(3) Time-saving methods of laundering;

(4) House cleaning made easier.

The follow-up planned called for testing circles for kitchen equipment where the women enrolled in the home demonstration clubs tried out various pieces of equipment lent for the purpose by local stores, with the idea of purchase of such equipment if it proved satisfactory.

. 1

| NoCountySU | RVEY OF KITCHEN IMPROVEMENT PROJECT | Date | | |
|--|--|--|----------------------------|--|
| NameA | ddressCom | munity | ے سے سب ہے ہے۔ سے سے سے سے | |
| Size of farmKi | nd of roadMiles to a | igent's offic | e | |
| Years: FarmingThis | farmYears owner | Years | tenant | |
| No. in family: Adults_Children | PhoneRadioGet university radio | programs, A | . M | |
| P.MOther stations from which | useful agricultural and home-economic | s informatio | on is ob | tained |
| | Member home makers' club: Pr | `es | Past | |
| Local leader (kitchen program) | Kitchen extension activities in hom | 19 | | |
| Kitchen, small (10x12 or less)Me | dium_Large (13x14 or more)No. door | sWindows_ | Screei | ned |
| Kitchen floer: Hardwood Softwood | Linoleum; Floor finish: WaxVa | rnishOil_ | Paint | Unf |
| Kitchen walls: PaintedWash.pape | rOrdinary paperUnfSink drain | : Closed(| OpenN | o drain |
| Water system: Grav. Gas eng. E | lec. mctorWindmillHand pump in b | kitchenWa | ter carr | ied |
| BathroomConnected with septic | tankCesspool | | | |
| Source of running hot water: Range | FurnaceGas heaterCoal heat | er0il he | eater | |
| <u>Heating system</u> : StovePipeless | furnaceHot air, hot water or steam | 1 | | |
| Lighting system: OilGasE | lec:Power lineHome plantDista | ance from pov | ver line. | |
| Fuel used for cooking: WoodCo | alKeroseneGasolineElect | tricity | Gas | |
| Refrigeration: IceElecGas | OilIceless; Vacuum cleaner | ElecHand | dCarp | et sweeper_ |
| Washing machine: HandGas eng | _ElecWash bdStationary tubs | Laundry done | e in kit | chen |
| Sent to laundry: AllPart; Fla | tiron; ElecGasolineSad; Dish | drainerP | res. coo | ker |
| StoolWheel trayMop wringer | _; Closet for: Cleaning equipmentExt | ra equipment. | Can | ned food |
| Cellar for roctsOutside clot | hing out of kitchen; Kitchen cab | inet: Built- | in | Movable |
| Time schedule followedAssis | tance received with household tasks: | Hours per | week by | members of |
| familyKind of assistance | | | Hours pe | r week out- |
| side helpRecord of household | expenditures keptBudget follower | edWoman | n cares | for poultry |
| GardenDairy equipm | entOther farm workPaid work | k off farm | Leisu | re time |
| daily for resting | Age Educati | on | Att | <u>itude</u> |
| Figure la Obverse side | e of questionnaire card used in collec | ting data. | | |
| | | | | |
| | | | | |
| Check extension activities relating | g to kitchem improvement attended or pe | ersonal cont | acts wit | h extension |
| workers regarding kitchen improvem | ent: Result demonstrations: Adult(dem | .a.)Jun | ior (dem | .jr.) |
| • | em.)General meeting(mtg.)Bull | | | |
| | xhibit (exh.)Farm or home visit (| | | |
| Telephone call (tel.) Correspo | ndence (cor.) Radio talk (r.) | Indirect | (ind.) | Market Company of the Parket Company of the Company |
| Practices adopted due to extension | Method responsible | <u>H.D.A.</u> | Co.Agt. | Specialis |
| Water supply | The state of the s | | | |
| Sewage disposal | girl and gain and with your first control and control | | | |
| <u>Lighting -natural or artificial</u> | | the country with the grant product of the country which contributes the country which contributes the country which contributes the country which country wh | | |
| Kitchen arrangement | The second state of the se | TO provide wealth specific account. | | |
| | ور المنت المنت والمن والمن والمناول المنتج المنت المنتج المنت المنتج المنت المنتج المنت المنتج المنت المنتج المنتج المنتج المنت المنتج | | | |
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| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Storage space or cleaning closet | | | | |
| | | 1 1 | 1 | |
| | | | | |
| | | 1 | 1 | |
| | | 1 | | |
| Extension Services of the United | States Department of Agriculture and | | ge of Ag | riculture. |
| University of Kentucky, cooperating | | | | |

Figure 1b. - Reverse side of questionnaire card used in collecting data.

- 4 -



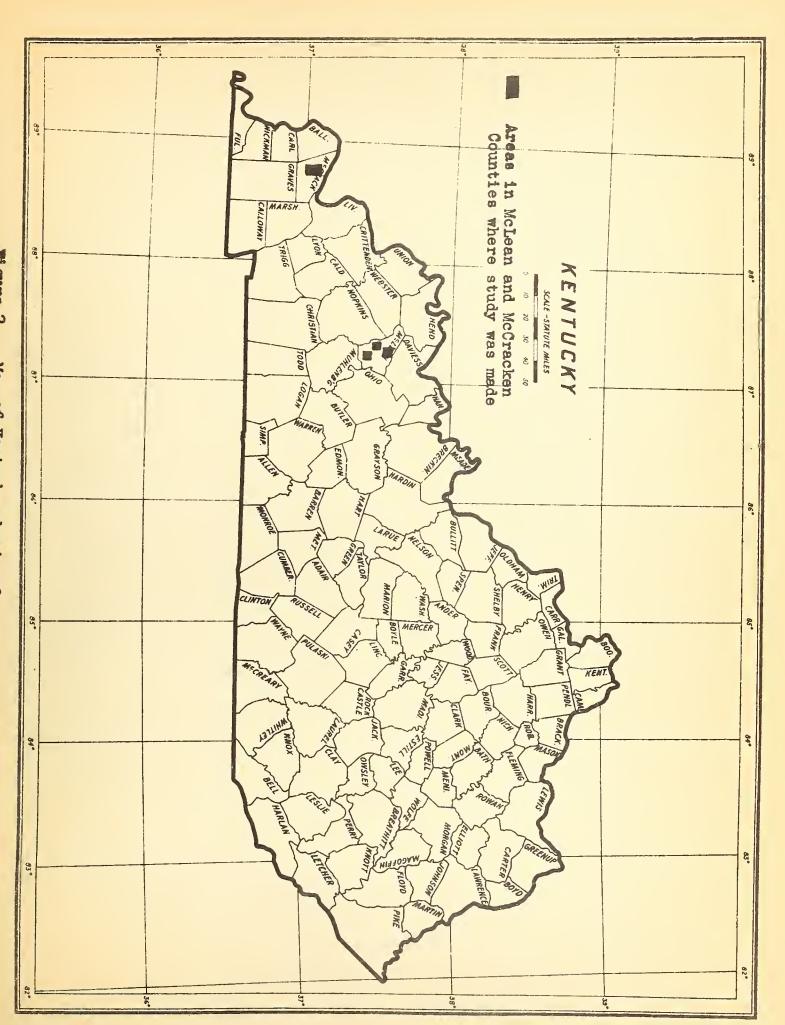


Figure 2. - Map of Kentucky showing location of areas included in study.



Table 1. - Home demonstration agents employed in counties included in study

| 77-waya et a mand | Dates employed | |
|--|--|--|
| Wane of agent | Appointment | Termination |
| McCracken County: Mrs. A. S. Cope. Miss M. F. Brown. Miss A. R. Oglesby. Mrs. O. T. Lyle. Miss L. B. Settle. Miss L. M. Seward (Assistant). Miss Sallie Coleman (Assistant). Miss Zilpha Foster. Urban home demonstration agents- Miss Elsie M. Spech (city of Paducah) (white). Mrs. Frances Cookley (city of Paducah) (colored). McLean County: Miss L. C. Geldnawer. Miss Mary L. Daugherty. Miss Hazel Vincent. | Apr. 1, 1915 May 1, 1917 July 1, 1917 Nov. 1, 1917 Jan. 1, 1920 June 13, 1922 Sept. 18, 1922 June 26, 1923 July 1, 1925 Mov. 1, 1927 Feb. 1, 1918 Sept. 26, 1917 July 1, 1923 Feb. 1, 1926 | Apr. 30, 1917 May 31, 1917 Oct. 31, 1917 Dec. 31, 1921 July 1, 1920 June 8, 1925 Oct. 10, 1922 Sept. 30, 1923 June 30, 1918 June 30, 1919 Oct. 7, 1925 |

INFORMATION REGARDING FARM HOMES INCLUDED IN STUDY

The farm families interviewed had lived on the present farm an average of 12.7 years. (Table 2.) The average size of farm was 82 acres. Eighty per cent of the families were owner-operators, while the remaining 20 per cent were tenant-operators. Only 3 per cent of the farmsteads were situated on paved roads. However, 59 per cent were located on roads which had been graveled, leaving 38 per cent situated on dirt roads.

The families for which records were obtained comprised 4.2 individuals, including children away at school at the time of collecting data, but not including grown children who were no longer regular members of the family.

Telephones were found in 37 per cent of the homes visited, and radios in 20 per cent of them.

That the farm woman was a member of an extension home makers' club was reported for 27 per cent of the homes, while 12 per cent had formerly been members of such a club.

Sixteen of the 280 farm homes studied had furnished local leaders to assist the county home demonstration agent with the conduct of the kitchen program. Extension teaching activities relating to kitchen problems had been conducted in 23 of the homes.

The average age of the home makers interviewed was 44 years.

Table 2. - General information relating to farm homes included in study

| I t em | Mumber | Percentage |
|---|---|---|
| Farm-home records obtained. Average size of farm (acres). Farm operated by (Owner. Years on present farm. (Paved road. Farmstead located on (Gravel road. (Dirt road. Average distance from county extension office (miles). Average size of family on farm. Families with children. Homes equipped with radio. Member of home makers! club Past Local leader of kitchen extension program. Kitchen extension teaching activity in home. Average age of farm home maker (years). | 280 82.4 225 55 12.7 9 166 105 6.8 4.2 193 104 56 75 35 16 23 43.9 | 80.4 19.6 3.2 59.3 37.5 68.9 37.1 20 26.8 12.5 5.7 8.2 |

Kitchens

About one-half of the home makers included in the study worked in large-sized kitchens, 12 by 14 feet or larger. One-fourth of the home makers worked in medium-sized kitchens, and one-fourth in the small-sized kitchens, 10 by 12 feet or smaller. (Table 3.)

The kitchens studied had an average of three doors and two windows, Screening the kitchen doors and windows was an established custom in this locality, since 93 per cent of the kitchens were found to be adequately screened.

More than three-fourths of the kitchen floors were covered with linoleum, usually in the form of an inexpensive printed linoleum rug which extended to within I foot of the edge of the room. The majority of the home makers did not varnish or wax the linoleum for ease of cleaning and lenger durability; however 20 per cent reported varnishing, and 14 per cent waxing.

Nearly 50 per cent of the kitchen walls were covered with ordinary wall paper. One-fourth of the kitchens were reported as having unfinished walls; "unfinished" meaning rough board walls or bare plastered walls. Paint was used in finishing the walls of the remaining one-fourth of the kitchens.

Table 3. - Size of kitchens, number of openings, and kinds
of wall and floor finishes

| Item | Number | Percentage |
|--|--|--|
| Farm-home records obtained. (Small size (10 by 12 or less) Kitchens (Medium size (Large size (13 by 14 or more) Average number of doors per kitchen. Average number of windows per kitchen. Kitchens screened. Kitchens with hardwood floors. Kitchens with softwood floors. Softwood floors painted. Softwood floors unfinished. Kitchens with linoleum floors. Linoleum floors waxed. Linoleum floors painted. Linoleum floors painted. Linoleum floors unfinished. Kitchens with walls of ordinary paper. Kitchens with unfinished walls. Kitchens with painted walls. Kitchens with walls of washable paper. Kitchens with calcimined or whitewashed walls. | 280 67 75 138 2.9 1 9 260 3 44 3 41 233 33 47 12 152 134 68 67 13 | 23.9 26.8 49.3 92.8 1.1 15.7 6.8 93.2 83.2 14.2 20.2 5.2 65.2 47.8 24.3 23.9 4.6 |



Water Supply

The water pail is a much-used piece of equipment in these Kentucky kitchens. Winety-one per cent of the homes reported having to carry all of the water needed for use in the house. (Table 4.) An additional 2 per cent carried part of the water required for the house. The data do not show how far the water had to be carried, but in most cases the well or cistern was close to the house in the dooryard, or even on the back porch.

Wine per cent of the homes had water in the kitchen. The source of power for supplying water was divided about equally among electric motor, gas engine, hand pump, windmill, and gravity system.

Sinks were reported in 16 per cent of the kitchens. Most of the sinks led to closed drains. An adequate supply of running hot water was provided in 5 per cent of the homes.

Table 4. - Water and sewage-disposal systems

| It em | Number | Percentage |
|---|---|---|
| Farm-home records obtained. Homes where water is carried. Homes where water in kitchen. Homes where water is supplied by electric motor. Homes where water is supplied by gas engine. Homes where water is supplied by hand pump in kitchen. Homes where water is supplied by gravity. Homes where water is supplied by windmill. Kitchens with sinks. Kitchens with sinks leading to closed drains. Kitchens with sinks leading to open drains. Kitchens with running hot water. Kitchens where water is heated by range. Homes with bathrooms. Homes with bathrooms draining to septic tank or cesspool. Homes with water system, sink, bathroom, and running hot water. | 261 24 7 6 5 5 1 45 37 7 | 93.2 8.6 2.5 2.1 1.8 1.8 1.6.1 13.2 2.5 5.0 4.6 4.6 2.5 |



· Heating and Lighting

Stoves were used to heat wholly or in part 68 per cent of the homes visited. Fireplaces were used in 43 per cent of the homes, so that about 10 per cent of the homes were using both means. Only 4 per cent of the homes were heated by furnaces. (Table 5.)

Electricity is just entering the areas studied, 9 per cent of the homes being so lighted. The source of electricity was about equally divided between the power line and the home electric plant.

Coal is most commonly used for fuel, wood being next in favor. Kerosene stoves were found in almost half of the homes, making cooking in summer an easier task.

Table 5. - Heating and lighting systems and fiel used for cooking

| Item | Number | Percentage |
|---|---|--|
| I Com | Mariber | rercentage |
| Farm-home records obtained. Homes heated wholly or in part with stoves. Homes heated wholly or in part with fireplaces. Homes heated with furnaces. Homes lighted with kerosene or gasoline lamps. Homes lighted with electricity. Homes lighted with electricity from power line. Homes lighted with electricity from home plant. Homes lighted with gas. Homes using coal for cooking. Homes using wood for cooking. Homes using gasoline for cooking. Homes using gasoline for cooking. Homes using gasoline for cooking. | 280 190 121 11 248 26 15 11 10 212 122 122 121 4 | 67.8 43.2 3.9 88.6 9.3 5.4 3.9 3.6 75.7 43.6 43.2 1.4 |

E

Laundering

The picture of how these home makers do their laundering is an interesting one. (Table 6.) The only labor-saving equipment that the majority of home makers have for laundering is the "lewly" washboard, 95 per cent of the homes being equipped with it. Ten per cent of the homes had washing machines, 4 per cent of which were run by gaseline or electric power, while 6 per cent were worked by hand power.

During the winter months 69 per cent of the homes report the laundry work done in the kitchen. In the snamer time the laundry is most often done in the yard under the trees.

Ironing is done with sadirons heated on the stove, 92 per cent of the homes reporting the use of this method. A few homes have both sadirons and electric or gas irons, since 9 per cent of the homes reported having gasoline irons, and 7 per cent electric irons.

The commercial laundry is evidently filling a need for some home, makers, since 14 per cent send all or part of their vashing to a commercial laundry.

Table 6. - Laundry equipment

| Item | Number | Percentage |
|---|---|--|
| Farm-home records obtained. Homes with washboards for laundry purposes. Homes with hand washing machines. Homes with power washing machines. Homes where laundry is done in kitchen. Homes where all washing is sent to commercial laundry. Homes where part of washing is sent to commercial laundry. Homes equipped with sadirons. Homes equipped with gasoline irons. Homes equipped with electric irons. | 265 28 16 12 192 21 21 19 259 | 94.6 10.0 5.7 4.3 68.6 7.5 6.8 92.5 9.3 7.1 |

Miscellaneous Hitchen Equipment

What kind of kitchen equipment do we find in these kitchens? We find many movable kitchen cabinets, 68 per cent of the homes being equipped with them. (Table 7.) Only one-half of the homes have storage for perishable foods in the form of ice or electric refrigerators.

A space either in the kitchen or outside set apart for the storage of canned foods, including fruits, vegetables, meat, jellies, or pickles, was reported for 55 per cent of the homes. Storage space in the form of cupboards for kitchen utensils that are not used every day, such as roasters and meat grinders, was provided in 44 per cent of the homes. Cellars for the storage of potatoes and other root vegetables were reported for 37 per cent of the homes.

The men's work clothes and the children's outer garments do not have to hang in 69 per cent of the kitchens, space having been provided elsewhere for these garments. The kitchen broom, mop, mop pail, and general cleaning equipment are kept in a special closet for this purpose in only one-fourth of the homes.

Ten to 18 per cent of the kitchens were found to be equipped with kitchen stools, dish drainers, and mop wringers, while 1 to 2 per cent reported having wheel trays and pressure cookers. Eleven per cent of the homes have electric or hand vacuum cleaners or carpet sweepers, which leaves 89 per cent of the homes where the work of cleaning floors has to be done with brooms.

Table 7. - Miscellaneous kitchen equipment

| Item | Number | Percentage |
|--|--|---|
| Farm-home records obtained. Homes with kitchen cabinets (any) Homes with movable kitchen cabinets. Homes with built-in kitchen cabinets. Homes with ice refrigerators. Homes with electric refrigerators. Kitchens with closets for canned food. Kitchens with closets for extra equipment. Kitchens with closets for cleaning equipment. Homes with cellars for storing roots and vegetables. Homes having space for work clothing outside kitchen. Kitchens with stools. Kitchens with dish drainers. Kitchens with mop wringers. Kitchens with mop wringers. Kitchens with wheel trays. Homes with vacuum cleaners, electric. Homes with vacuum cleaners, hand. Homes with carpet sweepers. | 280 \ 197 189 14 140 3 153 123 79 104 192 52 37 28 5 4 10 4 18 | 70.4 67.5 5.0 50.0 1.1 54.6 43.9 28.2 37.1 68.6 18.6 13.2 10.0 1.8 1.4 3.6 1.4 6.4 |

Assistance from the Family in Household Tasks and Outdoor Activities of Home Makers

The boys and girls, and sometimes the father, helped with the housework as is indicated by the fact that 68 per cent of the homes reported members of the family helping with household tasks, giving 16 hours weekly. (Table 8.)

The household tasks with which the family members assisted were dish washing, carrying fuel, carrying water, cleaning, preparing food, and laundering. (Table 9.) Taking care of small Johnny and Mary still seems to be Mother's task, since only 4 per cent reported assistance with this work.

Ninety-two per cent of the home makers reported caring for the poultry, 78 per cent for the garden, and 77 per cent for dairy equipment. Pay was received by 10 per cent of the women for work done off the farm. Yet three-fourths of the home makers reported that they had time daily for resting. (Table 8.)

A few women were beginning to use the time schedule and to plan money budgets.

Table 8. - Management of work, time, and money

| Item | Number | Percentage |
|---|--------|------------|
| Farm-home records obtained | 280 | |
| with household tasks | 190 | 67.8 |
| rendered by members of family in such homes. | 15.9 | |
| Homes employing outside help | 23 | 8.2 |
| help employed in such homes | 16.4 | |
| Homes where time schedule was being followed Women reporting leisure time daily for | 40 | 14.3 |
| resting | 206 | 73.6 |
| (Poultry | 259 | 92.5 |
| Women caring for (Garden | | 78.2 |
| (Dairy equipment | 216 | 77.1 |
| Women doing other farm work | | 42.8 |
| Women doing paid work off the farm Homes keeping a record of household | 27 | 9.6 |
| expenditures | 22 | 7.8 |
| Homes following a household budget | | 4.3 |



Table 9. - Assistance received from members of family

| Kind of assistance | Number | Percentage |
|--------------------------------------|--------|------------|
| Doing dishes | 90 | 32.1 |
| Carrying fuel | 70 | 25.0 |
| Carrying water | 65 | 25.2 |
| Cleaning | 53 | 18.9 |
| Preparing food | 52 | 18.6 |
| Laundering | 29 | 10.4 |
| Caring for children | 12 | 4.3 |
| Helping with general household tasks | 51 | 1.8.2 |
| | | |

INFLUENCE OF KITCHEN EXTENSION WORK

That some change had been made in the farm-home kitchen as the result of extension effort was reported by 30 per cent of the women interviewed. (Table 10.) Rearrangement of the kitchen to make it more convenient in accordance with suggestions of extension workers was reported by approximately 18 per cent of the women. Removal from the kitchen of unrecessary and useless articles, and increasing the attractive appearance of the kitchen were practices reported adopted in more than 17 per cent of the homes.

Other improved practices adopted as the result of extension teaching by more than 10 per cent of the women were small equipment added, kitchen wall finishes, renovation of large equipment, and the making of equipment at home. Other important changes made were in the height of working surfaces to prevent fatigue, treatment of kitchen floors, and the use of time studies to increase efficiency.

To date of study but a small beginning had been made in bringing the water supply into the farm hitchen. Six nomes had been given assistance with problems of water supply and sewage disposal. From Table 4 it will be noted that 256 or 91 per cent of the families carried all the water needed for use in the home.

(1

Table 10. - Influence of extension upon kitchen-improvement practices

| Item | Number | Percentage |
|--|--------|------------|
| | of | of all |
| | homes | homes |
| Farm-home records obtained | 230 | 100 |
| Homes adopting any kitchen practice due to | | |
| extension influence | 84 | 30.00 |
| Homes adopting improved practices in - | | |
| Kitchen arrangement | 50 | 17.86 |
| Useless articles eliminated | 49 | 17.50 |
| Attractive appearance | 48 | 17.14 |
| Small equipment | 41 | 14.64 |
| Kitchen walls | 37 | 13.21 |
| Large equipment renovated | 34 | 12.14 |
| Homemade equipment | 29 | 10.36 |
| Height of working surfaces | 22 | 7.86 |
| Kitchen floors | 21 | 7.50 |
| Time study | 21 | 7.50 |
| Lighting (natural or artificial) | 12 | 4.28 |
| Storage space or cleaning closet | 8 | 2.86} |
| Large equipment purchased | 6 | 2.14 |
| Sewage disposal | 6 | 2.14 |
| Water supply | 6 | 2.14 |
| Other | 7 | 2.50 |
| | 47 | |



Effectiveness of Means and Agencies Employed in Kitchen Extension as Related to Their Use

As the first step in determining how the women had been influenced by extension to make the various changes in kitchens reported, information was obtained regarding attendance at extension activities and contact with extension workers relating to kitchen problems. (Table 11.) Sixty-five per cent of the farm women interviewed had attended a kitchen meeting, received a kitchen bulletin, or had otherwise been exposed to kitchen extension information. Information had been received by these 65 per cent of the women in more than three different ways, on the average. Nearly 46 per cent of those exposed made some change in the farm-home kitchen.

Table 11. - Comparative effectiveness of methods used in kitchen extension

| Method | Percentage of women exposed to methods | Percentage of women influenced by methods to adopt | Percentage exposed who were influenced |
|---|---|--|--|
| Indirect influence. News service. Method demonstrations. Bulletins. Result demonstrations (adult). Circular letters. General meetings. Home visits. Radio, Leader-training meetings. Office calls. Telephone calls. Correspondence. Exhibits. Total, all methods. | 50.71 47.50 25.71 22.86 21.43 15.36 12.50 10.36 9.28 7.50 6.43 2.50 2.14 1.43 65.36 | 14.64 4.28 18.57 13.21 7.86 .71 6.07 5.36 1.78 6.43 1.43 .36 .36 30.00 | 28.87 9.02 72.22 57.81 36.67 4.65 48.57 51.72 19.23 85.71 22.22 14.28 25.00 45.90 |

That they had discussed kitchen problems with neighbors who had been "exposed" to kitchen extension information was reported by nearly 51 per cent of the women. Reading of kitchen extension news articles in local weekly and daily papers was reported by 48 per cent of the women. Twenty-six per cent of the women had attended method demonstration meetings and 12 per cent general meetings relating to kitchens. Result demonstration kitchens had been visited by 21 per cent of the women. Bulletins relating to kitchens had reached 23 per cent of the farm homes, while circular letters on the same subject had been received by 15 per cent of the women interviewed. Extension workers had visited 10 per cent of the homes to discuss kitchen problems. Nine per cent of the women had listened to kitchen talks over the radio, and 8 per cent had attended training meetings conducted for local leaders of the kitchen project.

The next problem was to correlate the various charges made in the farm kitchens with the various means and agencies through which the farm women had been exposed to extension information on such subjects. This required skill on the part of the interviewers. It is probable that in some cases the farm women failed to give credit to certain means and agencies which contributed to the change. It is also probable that in some cases the farm women may have given credit to means and agencies which did not contribute to the change. In general, however, the writers believe that the farm women interviewed could tell with a fair degree of accuracy from which of the extension sources information was obtained which contributed to each change in practice. The relationship of the percentage of women exposed to the various teaching means and agencies to the percentage of women influenced as the result of such exposure, may be expressed as a ratio. The ratio of "takes" to "exposures" is the highest for indirect influence, with method demonstrations ranking second, and bulletins third. Home visits resulted in changes being made in more than half the homes visited. General meetings resulted in information being used by nearly half those in attendance, while more than one out of every three women who visited a demonstration kitchen went home and put into use some of the practices demonstrated. In proportion to their use the news story and the circular letter were the least effective of the means and agencies employed in kitchen.extension.



Relative Effectiveness of Means and Agencies

The relative effectiveness of the means and agencies employed in kitchen extension can best be expressed in terms of the frequency with which reported in connection with the changes made in kitchen practices.

(Table 12.)

For purposes of comparison these data have been computed to the basis, total influence of all methods equals 100 per cent. In actual practice the making of a change is frequently associated with two or more means and agencies.

The method demonstration meeting leads the list of means and agencies in the frequency with which reported, having been mentioned as an influence in the adoption of 35 per cent of the practices changed. Leader-training meetings were credited with 16 per cent more, making a total of fully 50 per cent of the practices adopted, credited to these two means.

One practice out of every 6 changed was credited to the subjectmatter bulletin. Indirect spread from neighbor to neighbor accounted for the adoption of 1 out of every 8 improved practices.

Result demonstration kitchens influenced nearly 6 per cent of the changes in kitchens, while home visits were credited with 5 per cent of the changes made.

Table 12. - Methods of influencing the adoption of kitchen-improvement practices

| Method | Numbe r of practices | Percentage of total practices adopted* |
|---|---|---|
| Method-demonstration meetings Bulletins Leader training meetings Indirect influence Result demonstrations (adult) Home visits General meetings News service Radio Office calls Circular letters Exhibits Telephone calls Correspondence | 113 105 88 40 31 25 17 9 5 2 | 35.16 16.69 15.51 13.00 5.91 4.58 3.70 2.51 1.33 .74 .29 .29 |

^{*}Percentages computed to basis, total influence of all methods equals 100 per cent. In practice, the adoption of a single practice frequently involves two or more means or agencies.



Extension Workers Assisting with Changes in Kitchen Practices

The home demonstration agent was mentioned as a source of information by 69 of the 84 farm women influenced by extension to improve their kitchens. (Table 13.) The subject-matter specialist at the State agricultural college was given some credit for the changes made by 54 of the women. The local extension leader was mentioned as contributing to the change by 65 of the women reporting.

On the basis of practices changed nearly 89 per cent involved the home demonstration agent, 73 per cent the State specialist, and 64 per cent the local extension leaders. The close cooperation between the county home demonstration agents and the State specialist, and the emphasis placed upon local leaders as the kitchen project has been conducted in Kentucky, is evident from the above.

Table 13. - Extension agents involved in the adoption of improved kitchen practices

| Item | Number | Percentage |
|--|--------------------|------------|
| Farm-home records obtained | 280 | 100.00 |
| Homes in which some kitchen practice was adopted | 84 | 30.00 |
| Homes influenced to adopt kitchen practices by | | |
| Home demonstration agent | 6 <mark>9</mark> * | 24.64 |
| Subject-matter specialist | 54 | 19.28 |
| Local leader | 65 | 23.21 |
| Kitchen practices adopted | 397 | 100.00 |
| Home demonstration agent | 353 | 88.92 |
| Subject-matter specialist | 292 | 73.55 |
| Local leader | 256 | 64.48 |

Attitude Toward Extension

Immediately after each interview a record was made of the attitude of the farm weman toward home demonstration work. Seventy per cent of the women were reported as favorable, and only 2 per cent as opposed. (Table 14.) The remaining 28 per cent were classed as indifferent. They could not see how here demonstration work could assist them with kitchen or other home problems.

Table 14. - Attitude of Para women toward extension

| Attitude | Number of homos | Per cout of total homes |
|-------------|--------------------|-------------------------|
| Favorable | 196 | 70.0 |
| Indifferent | 79 | 28.2 |
| Opposed | 5 | 1.8 |

FACTORS APPROPING ADOPTION OF KITCHEN FRACTICES

What are some of the factors which may have helped to determine the practical application of extension unformation on kitchens by 30 per cent of the women included in the study, whereas 70 per cent had made no changes in the farm kitchens as the result of extension activities?

Jenure

Four-fifths of the homes included in the study were occupied by the owners, and one-fifth by the tenants. That condition of tenure had an important bearing upon hitchen improvement is evident from Table 15, which indicates that 53 per cent of the owner group changed hitchen practices as compared to 16 per cent of the tenant group. The number of changes made per 100 homes was nearly three times as great for the owner homes as for the tenant homes. It would seem but natural that tenant families should make fewer improvements about the kitchen than do home owners.



| Condition of tenure | Number | Per cent of total homes | Per cent of homes adopting kitchen practices | Number of practices adopted per 100 homes | |
|---------------------|--------|-------------------------------|--|---|--|
| Owners Tenants | 225 | 80.4 | 33.3 | 163 | |
| | 55 | 19.6 | 16.4 | 56 | |

Size of Farms

Whether the home was in connection with a small, medium, or large farm seems to have had little bearing upon the adoption of kitchen practices. (Table 16.) Somewhat more changes per kitchen were made on the larger farms than on the smaller farms, however.

Table 16. - Size of farm
in relation to homes adopting improved kitchen practices

| Acres in fam | Number of homes | Per cent of total | Per cent of homes adopting kitchen practices | Number of practices adopted per 100 homes |
|--------------------|-----------------------|-------------------------|--|---|
| 50 acres and less | 115 | 41.1 | 27.8 | 119 |
| 51 - 150 acres | 139 | 49.6 | 31.6 | 155 |
| 151 acres and over | 26 | 9.3 | 30.8 | 173 |



Homes with Telephones

From Table 17 it is apparent that adoption of kitchen practices was more frequently associated with homes that had telephones than with homes without telephones, 45 per cent of the former reporting practices changed as compared to 21 per cent of the latter. The farm women with telephones in their homes adopted three times as many improved practices per home as did the women without telephones.

The telephone probably was not the direct cause of changes in kitchen practices. It is doubtless true that the more progressive people had telephones, and because of the telephones were better informed regarding extension activities relating to kitchens.

Table 17. - Relationship of homes with telephones to adoption of improved

| Table 17. | | kitchen p | 1 a.C v 2.0 | |
|-------------------------|-----------------------|-------------------------|--|---|
| Gr oup | Number of homes | Per cent of total | Per cent of homes adopting kitchen practices | Number of practices adopted per 100 nomes |
| Homes with telephone. | 104 | 37.1 | 45,2 | 242 |
| Homes without telephone | - 70 | 62.9 | 21.0 | 82 |
| | | | 0553.00 | |

Distance from Extension Office

The percentage of farm women adopting better kitchen practices decreased somewhat as the distance of the farm home from the county extension office increased. (Table 18.) The number of kitchen practices changed per 100 homes was somewhat similar, however, for all three groups regardless of whether less than 5 miles, 6 to 9 miles, or more than 9 miles away from the county seat.

Table 18. - Relationship of distance from extension office to adoption of improved kitchen practices

| Distance | Number of homes | Per cent of total | Per cent of homes adopting hitchen practices | Number of practices adopted per 100 homes |
|-------------|-----------------------|-------------------------|--|---|
| | 74 | 26.4 | 37.8 | 138 |
| 0 - 5 miles | - 57 | 56.1 | 29.9 | 150 |
| 6 - 9 miles | 1 | 17.5 | 18.4 | 122 |
| 0101 | | | | |



Character of Roads

The kind of road upon which the farm home is situated seems to have had little if any bearing upon the use of kitchen extension information. (Table 19.) About the same proportion of the homes situated upon the little-improved dirt roads reported the adoption of improved kitchen practices as was true of the homes located on the graveled or paved roads. The number of changes per 100 farms was even higher for the homes on dirt roads than for the homes situated on the better classes of roads.

Table 19. - Character of roads as related to homes adopting improved kitchen practices

| Character of road | Number of homes | Per cent of total homes | Per cent of homes adopting kitchen practices | Number of practices adopted per 100 homes |
|-------------------|-----------------------|----------------------------------|--|---|
| Paved | 9 | 3.2 | 22.2 | 100 |
| Graveled | 166 | 59.3 | 30.7 | 131 |
| Dirt | 105 | 37.5 | 29.5 | 163 |

Educational Training

The farm women who had attended high school or college reported changes made in the kitchen as the result of extension more than twice as frequently as did the women who had not gone to school beyond the eighth grade. (Table 20.)

Three to four times as many changes per 100 homes were also made where educational training beyond the eighth grade had been obtained, as where school attendance had stopped with the eighth grade or before.

The fact that nearly one out of every four women with limited formal education had made use of extension information relating to kitchens would seem to indicate that extension programs in the counties studied have been made reasonably simple.



Table 20. - Education of farm women as related to adoption of improved kitchen practices

| Educational training | Number of homes | Per cent of total | Per cent of homes adopting kitchen practices | Number of practices adopted per 100 homes |
|-----------------------|--------------------|----------------------|--|--|
| Eighth grade or less | 223 | 79.6 | 24.2 | 97 |
| Some high school | 50 | 17.9 | 52.0 | 306 |
| More than high school | 7 | 2.5 | 57.1 | 386 |

Age of Farm Women

The highest percentage of farm women making practical use of kitchen information was in the 31 to 35 year old group. (Table 21.) However, there does not seem to be any appreciable diminution of use of extension information among the women interviewed until after the age of 60 has been reached. Age alone would therefore seem to have had very little influence upon the adoption of improved kitchen practices.

Table 21. - Relation of age of farm women to adoption of improved kitchen practices

| Age group | Number of women in group | Per cent of all women | Per cent of homes adopting kitchen practices | Number of kitchen practices adopted per 100 homes |
|-------------------|--------------------------------|-----------------------------|--|---|
| 30 years or less | 46 | 16.4 | 26.1 | 154 |
| 31 to 35 | 34 | 12.1 | 41.2 | 203 |
| 36 to 40 | 42 | 15.0 | 28.6 | 136 |
| 41 to 45 | 45 | 16.1 | 31.1 | 127 |
| 46 to 50 | 38 | 13.6 | 34.2 | 166 |
| 51 to 55 | 25 | 8.9 | 28.0 | 140 |
| 56 to 60 | · 23 | 8.2 | 34.8 | 152 |
| 61 years and over | 27 | 9.6 | 14. 8 | 37 |



Membership in Home Demonstration Clubs

So far we have considered factors which are largely outside the control of extension workers. However, the extent to which farm women have been enrolled in extension clubs is largely due to the organizing ability of the extension worker and the worth-while character of the extension program.

Where membership has been continued in the home demonstration club 84 per cent of the women made changes in their kitchens. (Table 22.) In those instances where membership in the home demonstration club had been discontinued, 26 per cent reported changed kitchen practices.

Where the women had never belonged to the club, but 7 per cent had been influenced by extension to improve their kitchens.

The number of changes made per 100 homes was 30 times as great for members as for nonmembers, and 6 times as great for present members as for former members. Evidently the problem of effectively reaching more women is either to increase membership in home demonstration clubs or devise some less formal way of extension teaching to influence the more than 50 per cent of women who have never affiliated with a home demonstration club.

Table 22. - Membership in home demonstration clubs as related to adoption of improved kitchen practices

| Group | Number Per cent Per of homes total pro | | Per cent of homes adopt- ing kitchen practices | Number of practices adopted per 100 homes |
|---|--|----------------------|---|---|
| Present members Former members Nonmembers | | 26.8 12.5 60.7 | 84.0 25.7 7.1 | 460 74 15 |

Contact with Kitchen Extension

In order to develop the thought of the preceding paragraph a little further, the 280 farm women interviewed have been divided into two groups, those having made some contact with kitchen extension activities through attendance at meetings, personal conference with home agent or specialist, and the like, and those who have not been in personal contact with kitchen extension activities. (Table 23.)

Nearly 78 per cent of the women in the contact group made practical application of the information received, whereas but 7 per cent of the women in the no-contact group reported the adoption of improved kitchen practices. Twenty-four times as many changes per 100 homes were reported for the contact group as for the no-contact group.

The necessity for bringing farm women into direct touch with the extension program before expecting large numbers of them to accept the better practice taught, is obvious.

(It is interesting to compare tables 15 to 23 with similar tables in Extension Service Circular 101, "The Effectiveness of Home-Economics Extension Work in Reaching Farm Women," pages 7 to 11, which show similar trends.)

Table 23. - Contact with extension as related to the adoption of improved kitchen practices

| Group | Number | Per cent of total homes | Per cent of homes adopting kitchen practices | Number of practices adopted per 100 homes |
|--|--------|-------------------------------|--|---|
| Women having made contact with kitchen extension | 90 | 32.14 | 77.78 | 406 |
| Women having made no such contact | 190 | 67.86 | 7.37 | 17 |



SUMMARY

This study includes 280 farm homes in two western Kentucky counties, information for which was obtained by the personal-interview-survey method.

Approximately half of the homes had large kitchens (13 by 14 feet or more). The average kitchen had three doors and two windows. Ninety-three per cent of the kitchens were screened against flies and other insects. Print linoleum covered 83 per cent of the floors. The walls in 50 per cent of the kitchens were covered with ordinary wall paper.

Stoves and fireplaces were the common means of heating the houses.

Kerosene and gasoline lamps provided light in 89 per cent of the cases.

The washboard was the sole method of laundering in 76 per cent of the homes. The kitchen was also the laundry room in 69 per cent of the homes. Ordinary sadirons were used for all ironing in 84 per cent of the homes studied.

That all the water used in the home had to be carried a greater or lesser distance was reported for 91 per cent of the homes studied.

Kitchen cabinets were found in 70 per cent of the homes. Ice refrigerators were available to care for perishable foods in half of the homes. Cellars for storing roots and other vegetables had also been provided in 37 per cent of the homes.

More than half of the kitchens contained closet space for storing canned food, and 44 per cent also provided closet space for equipment not in everyday use.

As only about 11 per cent of the homes had a carpet sweeper or vacuum cleaner, nearly 90 per cent of the women were dependent upon the broom for sweeping operations.

The farm women were assisted with household tasks by other members of the family in 68 per cent of the homes. That the farm woman partially or wholly cares for the dairy utensils, the poultry, and the garden was reported for 77 to 92 per cent of the homes. Forty-three per cent of the farm women did other farm work, 10 per cent performing paid work off the farm. Some leisure time daily for resting was reported by 74 per cent of the women.

That some change due to extension teaching had been made in connection with the kitchen or the activities centering therein was reported by 30 per cent of the 280 women interviewed. In the homes influenced by extension numerous changes were reported, many of them involving several aspects of the kitchen-improvement work.

D



Leader-training and method-demonstration meetings were credited with having influenced the adoption of more than 50 per cent of all the kitchen practices changed, as compared to bulletins which influenced nearly 17 per cent, and indirect spread which accounted for 13 per cent of the better practices adopted. Result demonstrations, home visits, general meetings, and news articles each influenced from 3 to 6 per cent of the practices adopted.

The extent to which local leaders have been used in kitchen extension in the areas studied is evidenced by the fact that assistance from local leaders was mentioned in connection with 64 per cent of the practices changed.

Owners made more changes in kitchen practices than did tenants.

Size of farm, distance from the extension office, and age of farm women had little bearing upon adoption of kitchen practices.

Educational training beyond the eighth grade was associated with greater use of extension information.

Whether or not the farm woman belonged to a home demonstration club or had otherwise come into personal contact with home-economics extension workers was an exceedingly important factor in the spread of kitchen information.





